



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,163	09/12/2003	Harry Bims	1875.7300002	7509
26111 7590 08/24/2007 STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C. 1100 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER AJAYI, JOEL	
			ART UNIT 2617	PAPER NUMBER
			MAIL DATE 08/24/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/661,163

Applicant(s)

BIMS, HARRY

Examiner

Joel Ajayi

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-11, 13-21, and 23-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-11, 13-21, and 23-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1, 3-11, 13-21, and 23-44 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 3, 4, 8, 11, 13, 14, 18, 21, 23, 24, 28, 31, 33-35, 37-39, 41-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Frost (U.S. Patent Number: 4,284,848)** in view of **Shaughnessy et al. (U.S. Patent Number: 5,392,449)**, and further in view of **Birgeson (U.S. Patent Number: 6,138,009)**.

Consider **claim 1**; Frost discloses a method, comprising:

Detecting, at a switch, a presence of a first repeater (column 3, lines 37-44; column 21, lines 7-14); automatically configuring the first repeater to enable the first repeater to communicate with a mobile station and the switch without using information resulting from a site survey of the location (column 3, lines 37-44; column 21, lines 7-14).

Frost fails to specifically disclose that the first repeater is coupled to the switch at a location.

In the same field of endeavor Shaughnessy discloses that the first repeater is coupled to the switch at a location (column 1, lines 35-50).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Shaughnessy into the method of Frost in order to provide continuous service in a communication system.

Frost and Shaughnessy disclose the claimed invention except downloading software from the switch to the first repeater to enable the first repeater to operate and communicate with the switch and the mobile station.

In the same field of endeavor Birgeson discloses downloading software from the switch (BSC, MSC) to the first repeater (BTS) to enable the first repeater to operate and communicate with the switch and the mobile station (column 5, lines 8-33; column 11, lines 30-52).

Art Unit: 2617

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Birgeson into the method of Shaughnessy and Frost in order to customize wireless communication units.

Consider **claim 11**; Frost discloses an apparatus, comprising:

Means for detecting, at a switch, a presence of a first repeater (column 3, lines 37-44; column 21, lines 7-14); means for automatically configuring the first repeater to enable the first repeater to communicate with a mobile station and the switch without using information resulting from a site survey of the location (column 3, lines 37-44; column 21, lines 7-14).

Frost fails to specifically disclose that the first repeater is coupled to the switch at a location.

In the same field of endeavor Shaughnessy discloses that the first repeater is coupled to the switch at a location (column 1, lines 35-50).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Shaughnessy into the method of Frost in order to provide continuous service in a communication system.

Frost and Shaughnessy disclose the claimed invention except downloading software from the switch to the first repeater to enable the first repeater to operate and communicate with the switch and the mobile station.

In the same field of endeavor Birgeson discloses downloading software from the switch (BSC, MSC) to the first repeater (BTS) to enable the first repeater to operate and communicate with the switch and the mobile station (column 5, lines 8-33; column 11, lines 30-52).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Birgeson into the method of Shaughnessy and Frost in order to customize wireless communication units.

Consider **claim 21**; Frost discloses a machine-readable medium having executable code to cause a machine to perform a method (column 3, lines 37-44; column 21, lines 7-14), the method comprising:

Detecting, at a switch, a presence of a first repeater (column 3, lines 37-44; column 21, lines 7-14); automatically configuring the first repeater to enable the first repeater to communicate with a mobile station and the switch without using information resulting from a site survey of the location (column 3, lines 37-44; column 21, lines 7-14).

Frost fails to specifically disclose that the first repeater is coupled to the switch at a location.

In the same field of endeavor Shaughnessy discloses that the first repeater is coupled to the switch at a location (column 1, lines 35-50).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Shaughnessy into the method of Frost in order to provide continuous service in a communication system.

Frost and Shaughnessy disclose the claimed invention except downloading software from the switch to the first repeater to enable the first repeater to operate and communicate with the switch and the mobile station.

In the same field of endeavor Birgeson discloses downloading software from the switch (BSC, MSC) to the first repeater (BTS) to enable the first repeater to operate and communicate with the switch and the mobile station (column 5, lines 8-33; column 11, lines 30-52).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Birgeson into the method of Shaughnessy and Frost in order to customize wireless communication units.

Consider **claim 31**; Frost discloses a method, comprising:

Automatically downloading information (configuring) from the switch (column 3, lines 37-44; column 21, lines 7-14); and configuring the repeater using the information to enable the repeater to communicate with one or more mobile station without using data resulting from a site survey (column 3, lines 37-44; column 21, lines 7-14).

Frost fails to disclose detecting a repeater plugged into a switch port of a switch.

In the same field of endeavor Shaughnessy discloses detecting a repeater plugged into a switch port of a switch (coupled) (column 1, lines 35-50).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Shaughnessy into the method of Frost in order to provide continuous service in a communication system.

Frost and Shaughnessy disclose the claimed invention except downloading software from the switch.

In the same field of endeavor Birgeson discloses downloading software from the switch (column 5, lines 8-33; column 11, lines 30-52).

Art Unit: 2617

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Birgeson into the method of Shaughnessy and Frost in order to customize wireless communication units.

Consider **claim 35**; Frost discloses an apparatus, comprising:

Means for automatically downloading information (configuring) from the switch (column 3, lines 37-44; column 21, lines 7-14); and configuring the repeater using the information to enable the repeater to communicate with one or more mobile station without using data resulting from a site survey (column 3, lines 37-44; column 21, lines 7-14).

Frost fails to disclose a means for detecting a repeater plugged into a switch port of a switch.

In the same field of endeavor Shaughnessy discloses a means for detecting a repeater plugged into a switch port of a switch (coupled) (column 1, lines 35-50).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Shaughnessy into the method of Frost in order to provide continuous service in a communication system.

Frost and Shaughnessy disclose the claimed invention except downloading software from the switch.

In the same field of endeavor Birgeson discloses downloading software from the switch (column 5, lines 8-33; column 11, lines 30-52).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Birgeson into the method of Shaughnessy and Frost in order to customize wireless communication units.

Consider **claim 39**; Shaughnessy clearly discloses a machine-readable medium having executable code to cause a machine to perform a method (column 1, lines 35-50), the method comprising:

Automatically downloading information (configuring) from the switch (column 3, lines 37-44; column 21, lines 7-14); and configuring the repeater using the information to enable the repeater to communicate with one or more mobile station without using data resulting from a site survey (column 3, lines 37-44; column 21, lines 7-14).

Frost fails to disclose detecting a repeater plugged into a switch port of a switch.

In the same field of endeavor Shaughnessy discloses detecting a repeater plugged into a switch port of a switch (coupled) (column 1, lines 35-50).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Shaughnessy into the method of Frost in order to provide continuous service in a communication system.

Frost and Shaughnessy disclose the claimed invention except downloading software from the switch.

In the same field of endeavor Birgeson discloses downloading software from the switch (column 5, lines 8-33; column 11, lines 30-52).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Birgeson into the method of Shaughnessy and Frost in order to customize wireless communication units.

Consider **claim 43**; Frost discloses an apparatus, comprising:

The switch automatically detects a presence of the repeater and configures the repeater to enable the repeater to communicate with a mobile station wirelessly without using information resulting from a site survey (column 3, lines 37-44; column 21, lines 7-14).

Frost fails to disclose a switch capable of coupling with one or more repeaters.

In the same field of endeavor Shaughnessy discloses a switch capable of coupling with one or more repeaters (column 1, lines 35-50).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Shaughnessy into the method of Frost in order to provide continuous service in a communication system.

Consider **claim 44**; Frost discloses an apparatus, comprising:

The repeater downloads information from the switch for configuring the repeater to enable the repeater to communicate with a mobile station wirelessly without using information resulting from a site survey (column 3, lines 37-44; column 21, lines 7-14).

Frost fails to disclose a repeater capable of coupling to a switch, which is coupled to one or more repeaters.

In the same field of endeavor Shaughnessy discloses a repeater capable of coupling to a switch, which is coupled to one or more repeaters (column 1, lines 35-50).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Shaughnessy into the method of Frost in order to provide continuous service in a communication system.

Consider **claims 3, 13, 23, and 33**; Frost discloses receiving the information at the first repeater (Frost, column 3, lines 37-44; column 21, lines 7-14); and executing the information to

Art Unit: 2617

configure the first repeater communicating with the switch and the mobile station (Frost, column 3, lines 37-44; column 21, lines 7-14).

Except:

Receiving and executing the software at the first repeater.

In the same field of endeavor Birgeson discloses receiving and executing the software at the first repeater (BTS) (column 5, lines 8-33; column 11, lines 30-52).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Birgeson into the method of Shaughnessy and Frost in order to customize wireless communication units.

Consider **claims 4, 14, 24, 34, 37, 38, 41, and 42**; Frost discloses the switch receiving a signal that indicates completion of the configuration (column 3, lines 37-44; column 21, lines 7-14).

Consider **claims 8, 18, and 28**; Shaughnessy discloses locating a second repeater currently coupled to the switch, the second repeater suitable to communicate with the mobile station; and associating the mobile station with the second repeater (column 1, lines 35-50).

Claims 5, 6, 10, 15, 16, 20, 25, 26, 30, 32, 36, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Frost (U.S. Patent Number: 4,284,848)** in view of **Shaughnessy et al. (U.S. Patent Number: 5,392,449)**, and further in view of **Tikalsky (U.S. Patent Number: 5,875,179)**.

Consider **claims 5, 15, and 25**; Frost and Shaughnessy clearly disclose the claimed invention except determining whether the first repeater is more appropriate with respect to the

mobile station than a second repeater with which the mobile station had previously communicated.

In the same field of endeavor Tikalsky clearly discloses determining whether the first repeater is more appropriate with respect to the mobile station than a second repeater with which the mobile station had previously communicated (column 3, lines 55-59; column 8, lines 26-29).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Tikalsky into the method of Shaughnessy and Frost in order to synchronize communication among plural nodes/communication stations, which communicate within a network having a wireless backbone of repeaters.

Consider **claims 6, 16, and 26**; Tikalsky discloses disassociating the mobile station from the second repeater (column 3, lines 55-59; column 8, lines 26-29); and re-associating the mobile station with the first repeater (column 3, lines 55-59; column 8, lines 26-29).

Consider **claims 10, 20, 30, 32, 36, and 40**; Tikalsky discloses drawing power from the switch to power up the first repeater (transmission power level) (column 11, lines 33-38); performing an initialization within the first repeater; and transmitting a signal to the switch to indicate the presence of the first repeater (column 4 line 57- column 5, line 2).

Claims 7, 9, 17, 27, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Frost (U.S. Patent Number: 4,284,848)** in view of **Shaughnessy et al. (U.S. Patent Number: 5,392,449)**, and further in view of **Weissman (U.S. Patent Application Number: 2002/0061763)**.

Art Unit: 2617

Consider **claims 7, 17, and 27**; Frost and Shaughnessy clearly disclose the claimed invention except detecting decoupling the first repeater from the switch; and signaling an alarm upon detecting the decoupling of the first repeater from the switch.

In the same field of endeavor Weissman clearly discloses detecting decoupling the first repeater from the switch (paragraph 3, lines 1-9; paragraph 116, lines 1-9; paragraph 119, lines 1-12); and signaling an alarm upon detecting the decoupling of the first repeater from the switch (paragraph 3, lines 1-9; paragraph 116, lines 1-9; paragraph 119, lines 1-12).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Weissman into the method of Shaughnessy and Frost in order to provide a method and apparatus for controlling a gain between repeaters in a cellular communications network.

Consider **claims 9, 19, and 29**; Weissman discloses that the re-association is performed transparently to a user of the mobile station (abstract, lines 1-9; paragraph 3, lines 17-22).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Joel Ajayi whose telephone number is (571) 270-1091. The Examiner can normally be reached on Monday-Thursday from 7:30am to 5:00pm and Friday 7:30am to 4:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Charles Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Joel Ajayi

Art Unit: 2617

August 16, 2007


Rafael Perez-Gutierrez
Supervisory Patent Examiner
Technology Center 2600
Art Unit 2617

8/20/07